

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 09-000941  
(43)Date of publication of application : 07.01.1997

(51)Int.Cl. B01J 35/02  
A61L 2/10  
A61L 9/20  
B01D 53/86  
B01J 21/06  
C02F 1/32  
C03C 17/23  
H01L 33/00

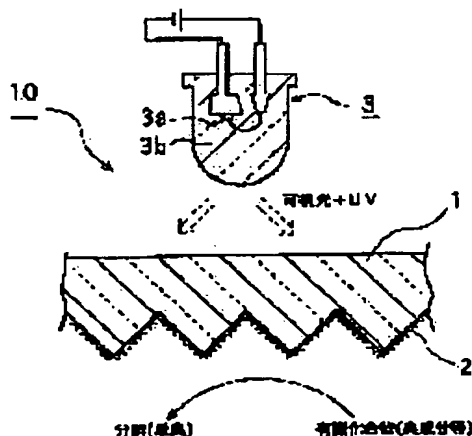
(21)Application number : 07-151663 (71)Applicant : TOYODA GOSEI CO LTD  
(22)Date of filing : 19.06.1995 (72)Inventor : SAKAI KAZUHIRO  
IWASA TADANOBU  
YAMANAKA OSAMU

## (54) PHOTOCATALYTIC DEVICE AND DEVICE APPLYING THE SAME

### (57)Abstract:

**PURPOSE:** To obtain a photocatalytic device utilizing a photocatalytic reaction with a photocatalyst for purifying and sterilizing air and water as a compact structure applicable even to a place not exposed to sunbeams, a narrow place, etc., consuming small electric power and emitting chromatic light.

**CONSTITUTION:** This photocatalytic device has a substrate 1 with a photocatalytically reactive surface formed by carrying a photocatalyst 2 made of a thin titanium dioxide film and a light emitting diode disposed so that it can illuminate the photocatalyst 2 and chiefly radiating prescribed visible light and UV rays of 360-400nm wavelength. Since the diode 3 is used as a UV source for activating the photocatalyst 2, the entire device can be made compact. This device is put to practical use as a deodorizing device, a drinking water purifier, an antibacterial



device with an antibacterial surface, etc.

## LEGAL STATUS

[Date of request for examination] 06.04.2000

[Date of sending the examiner's decision of rejection] 25.11.2003

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection] 2003-24937

[Date of requesting appeal against examiner's decision of rejection] 25.12.2003

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office

